TITLE INDEX

Volume 55

1983

A

A management approach to energy cost control in wastewater utilities (Prindle) 1239
A marine recreational water quality criterion consistent with indicator concepts and risk analysis (Cabelli, Dufour, McCabe, Levin) 1306
A new design procedure for waste stabilization ponds (Uhlmann, Reckнagel, Sandring, Schwarz, Eckelmann) 1252
A new operator service (Editorial) 1315
A powerful legacy (Editorial) 429
A practical method to estimate the acetoclastic methanogenic biomass in anaerobic sludges (Valcke, Verstraete) 1191
A quality assurance program at a municipal wastewater treatment plant laboratory (Aldenhoff, Ernest) 1132
A triumphant return (Editorial) 909
Act II for William Ruckelshaus (Monitor) 911
Activated sludge clarifier design improvements (Stukenberg, Rodman, Touslee) (Feature) 341
Active versus passive water quality monitoring programs for wastewater discharges (Lee, Jones) 405
Aerobic biological treatment of nitrogen-deficient organic wastewaters (Emerson, Sherrard) 467
Aerosol release of cyanophages and coliforms from activated sludge basins (Cannon) 1070
Algae removal by the overland flow process (Witherow, Bledsoe) 1256
Application of an ozone disinfection model for municipal wastewater effluents (Meckes, Venosa, Evans) 1158
Assessment of heavy metals and PCBs at sludge application site (Webber, Monteith, Corneau) 187
Assessment of secondary clarification design concepts (Parker) 349
Availability of sorbed substrate for microbial degradation on granular activated carbon (Li, DiGiano) 392

B

Bacterial die-off kinetics in waste stabilization ponds (Polprasert, Dissanayake, Thanh) 285
Batch flotation tests: how useful are they? (Bratby) (Communication) 110
Bioassay evaluation of diversity and community comparison indexes (Perkins) 522
Biodegradation and adsorption within activated carbon adsorbers (Peel, Benedek) 1168
Biological treatability of specific organic compounds found in chemical industry wastewaters (Stover, Kincannon) 97

C

Capacity of natural wetlands to remove nutrients from wastewater (Nichols) 495
Certification uncertainties (Monitor) 1128
Changing the Clean Water Act: reflections on the longterm (Feature) 123
Characteristics of activated sludge effluents before and after breakpoint chlorination (Trgovcich, Kirsh, Grady) 966
Characterization of trace and toxic metals in sediments of a lake being restored (Gambrell, Reddy, Khalid) 1201
Chemical composition and possible mutagenicity of municipal sludges (Clevenger, Hemphill, Roberts, Mullins) 1470
Chesapeake Bay action—the critical role of the states (Monitor) 1224
Chloride pollution of the Great Lakes (Sonzogni, Richardson, Rodgers, Monteith) 513
Clean Water Act—the view from here (Wolman) (Feature) 14
Comparison of three forms of 2-chloro-6-(trichloromethyl) pyridine as a nitrification inhibitor in BOD tests (Young) (Communication) 415
Composite correction program to improve plant performance (Coburn, Popowchak) 929
Composite samples overestimate waste loads (Schaeffer, Kerster, Bauer, Rees, McCormick) 1387
Comprehensive program for surveillance of package plants and stabilization ponds (Weigand) 1138
Computing discharge from large combined sewer overflows (Graham, Khayer) 1015
Control of ozone disinfection by exhaust gas monitoring (Venosa, Meckes) 1163
Cost of clean water—impact on small communities (Smit, Chapin) (Feature) 444
Current state-of-the-art of wastewater disinfection (Venosa) 457

D

Determination of nuisance odor in a community (Bruvold, Rappaport, Wu, Bulmer, DeGrange, Kooler) 229
Development of a regional sludge dewatering facility using pressure filters (Shimp, Houck, Baumgartner) 130
Development of dynamic head loss criteria for raw sludge pumping (Carthew, Goehring, van Teylingen) 472
Disinfection of amoebic cysts in water with free chlorine (Rubin, Engel, Sproul) 1174
Diurnal water quality modeling - a case study (Deb, Bowers) 1476

E

Effect of effluent disinfection on risks of viral disease transmission via recreational water exposure (Haas) 1111
Effectiveness of treatment to meet phosphorus objectives in the Great Lakes (Chapra, Wicke, Heidtke) 81
Effects of ammonia and chlorine on fish in streams receiving secondary discharges (Paller, Lewis, Heidinger, Wawronowicz) 1087
Effects of dissolved oxygen and mixing on algal autoflotation (Arbelaez, Koopman, Lincoln) 1075
Effects of ozone on the biodegradability of biorefractory pollutants (Stover, Medley) 489
Effects of periodically reversing the direction of flow through an RBC (Bandy, Scholze) 1457
Election '82: crowding out clean water (Monitor) 11
Enumeration of chlorine-damaged fecal coliforms in wastewater effluents (Graham and Brenniman) 164
Evaluation of a dissolved oxygen field test protocol (Kulin, Schuk, Kugelman) 178
Exertion of 5-day nitrogenous oxygen demand in nitrifying wastewaters (Washington, Lue-Hing, Zenz, Rao, Obayashi) 1196

F

Factors affecting fine bubble diffused aeration (Huibregtse, Rooney, Rasmussen) 1057
Factors affecting the clarification performance of activated sludge final settlers (Tuntoolavest, Miller, Grady) 234
Factors affecting the release of trace metals from municipal sludge ashes (Theis, Padgett) 1271
Fate of toxic organic compounds in wastewater treatment plants (Petrasek, Kugelman, Austern, Pressley, Winslow, Wise) 1286

Fine-coal-aided centrifugal dewatering of waste activated sludge (Albertson, Kopper) 145
Finishing the job (Editorial) 209
Flow measurement in sewer lines by the dye dilution method (Gutierrez, Siu) 531

G

Gorsuch cited for contempt of Congress (Monitor) 119
Guidelines for sampling ground water (Lee, Jones) 92

H

Heat recovery, flow equalization, and alternate discharge highlight AWT expansion (Shimp, Berg, Swanson, Brown) 249
Heavy metal removal in a packed-bed, anaerobic upflow (ANFLOW) bioreactor (Rivera) 1450
Here comes the water bubble—maybe (Monitor) 116
How to construct reference distributions to evaluate treatment plant effluent quality (Berthouex, Hunter) 1417

I

Impact of snowmelt-runoff from agricultural watersheds on dissolved oxygen (Sullivan) 170
Incorporating the stochastic nature of water quality into management (Ward, Loftis) 408
Inexpensive heavy metal removal by foam flotation (Thackston, McIntyre, Rodriguez, Wilson) 1144
Influence of three factors on clarification in the activated sludge process (Cashion, Keinath) 1331
Infrastructure financing—A new emphasis on rehabilitation (Monitor) 914
Inhibition of anaerobic digestion by organic priority pollutants (Johnson, Young) 1441
Inhibition of flocculation processes in systems containing organic matter (Narkis, Rebhun) 947
Interactions of noncompetitive inhibitors on the nitrification process (Beg, Atiqullah) 1080
Irradiation as a means to minimize public health risks from sludge-borne pathogens (Yeager, O'Brien) 977

K

Kinetics of bacteria and bacteriophages in anaerobic filters (Polprasert, Hoang) 385
Kinetics of carbon and ammonia nitrogen removal in RBC's (Pano, Middlebrooks) 956
Kinetics of dissimilatory nitrate and nitrite reduction in suspended growth culture (Beccari, Passino, Ramadori, Tandoi) 58

L

Lake phosphorus loading from septic systems by seasonally perched groundwater (Gilliom, Patmont) 1297
Landfill gas utilization at a wastewater treatment plant (Weddle, McDonald, Howard) 1325
Leaching characteristics of lignite ash (Humenick, Lang, Jackson) 310
Least cost process design for granular activated carbon adsorbers (Benedek, Naraitz) 1244
Lime stabilization: effectiveness of two process modifications (Westphal, Christensen) 1381

M

Magnesium recycling by carbonation and centrifugation of high-lime wastewater sludge (Idelovitch, Wachs) 136
Management of groundwater problem (Stollar, Pellissier, Studebaker) 1393
Management training as a troubleshooting tool (Peterson, Manolakis) 1051
Managing water resources: Lessons for the U.S. (Cleary) (Feature) 1034
Measuring anaerobic sludge digestion and growth by alkalimetric titration (Jenkins, Morgan, Sawyer) 448
Measuring the effect of biocatalytic additives on treatment process performance (Baryla, Young) 1373
Mechanism of clarification failure (Keinath, Laquidara) 54
Metals removals and partitioning in conventional wastewater treatment plants (Petrasek, Kugelman) 1183
Method for estimating the capacity of an activated sludge plant (Riddell, Lee, Wilson) 360
Metro Atlanta water pollution control—a decade of progress (Troxler, Reinhart, Hallum) (Feature) 1121
Microbiological aerosols from a field-source wastewater irrigation system (Bausum, Schaub, Bates, McKim, Schumacher, Brockett) 65
Mideast bids for clean water (Monitor) 211
Monitoring for water quality: fixed stations versus intensive surveys (van Belle, Hughes) 400
Mortality patterns of indicator organisms during aerobic digestion (Kuchenrither, Benefield) 76
Municipal application of sequencing batch treatment (Irvine, Ketchum, Breyfogle, Barth) 484

N

Negotiating regulations—Let's negotiate, not litigate (Monitor) 7
New Concepts and Practices in Activated Sludge Process Control (Book Review) 22a
1982 salaries of wastewater personnel (Regan) (Feature) 918
Nitrification facilities start-up and initial operation (Bailey, Bonomo, Jones) 221
Nitrification in BOD(base-sub)5(sub-base) test increase POTW non-compliance (Hall, Foxen) 1461
Nitrogen control in domestic wastewater rapid infiltration systems (Leach, Enfield) 1150
NWF President Benjamin C. Dysart III—The environmental engineer as conservationist (Monitor) 1318

O

Ocean Dumping Quandary (Book Review) 680a
One-year survey of ATP and dynamic behavior of an activated sludge treatment plant (Roy, LeDuy, Roy) 1348
Online literature searching (Murr) (Feature) 541
Operation and maintenance assurance systems for managing a wastewater treatment plant (Weinberg, Lloyd) 1228
Operational characteristics of federally funded wastewater treatment plants (Uchrin, Caspe) 935
Oxygen demand of taconite tailings (Plumb, Lee) 317
Oxygen transfer efficiency measurements in mixed liquor using off-gas techniques (Redmon, Boyle, Ewing) 1338

P

Performance comparison of the air and high-purity-oxygen activated sludge systems (Nelson, Puntenney) 336
Performance of SBR activated sludge processes with nitrification/denitrification (Silverstein, Schroeder) 377
Phosphorus flux rates in lake sediments (Mawson, Gibbons, Funk, Hartz) 1105
Physical design of overland flow systems (Smith, Schroeder) 255
Pilot plant determination of oxygen transfer in fine bubble aeration (Doyle, Boyle, Rooney, Huibregtse) 1435
Predicting removal of trace organic compounds by biofilms (Namkung, Stratton, Rittman) 1366
Predictive capability of U.S. OECD phosphorus loading-eutrophication response models (Rast, Jones, Lee) 990
Pride in the past—faith in the future (Jones) (WPCF Presidential message) 5
Project performance—A question of accountability (Monitor) 217

R

Rapid differentiation of *Streptococcus fecalis* var. *liquifaciens* from other fecal streptococci in water testing (Mates) (Communication) 1211

Rational risk assessment (Editorial) 1405
Recovery of metals from electroplating wastes using liquid-liquid extraction (Clevenger, Novak) 984
Reflections, perceptions, and projections (Wolman) (Feature) 1412
Reflections on seven decades of activated sludge history (Alleman, Prakasam) (Feature) 436
Removal mechanisms for toxic priority pollutants (Kincannon, Stover, Nichols, Medley) 157
Removal of organic contaminants from coal conversion condensates (Luthy, Stamoudis, Campbell, Harrison) 196
Removal of priority pollutants in integrated activated sludge-activated carbon treatment systems (Weber, Corfis, Jones) 369
Response of methane fermentation systems to industrial toxicants (Parkin, Speece, Yang, Kocher) 44
Resumption of local leadership (Editorial) 1
Role of ammonia-N in secondary effluent chlorination (Dhaliwal, Baker) 454
Rural wastewater planning (Wolfson) 1042

S

Setting effluent ammonia limits to meet in-stream toxicity criteria (Yake, James) 303
Sludge recycle and reuse in acid mine drainage treatment (Keefer, Sack) 278
Starrett City/New York City energy exchange project (Starkey, Forndran) 941
Start-up and operating characteristics of an RBC facility in a cold climate (Lehman) 1233
Statistical models for water quality regulation (Loftis, Ward, Smillie) 1098
STEP pressure sewers are a viable wastewater collection alternative (Tollefson, Kelly) 1004
Study of microbial inactivation in the marine environment (Borrego, Arrabal, de Vicente, Gomez, Romero) 297
Survival incidence of antibiotic-resistant coliforms in a lagoon system (Kish, Lampky) 506

T

Team effort solves operational problems (Daigger, Richter, Collins, Smith) 17
Temperature effects on oxygen transfer to rotating biological contactors (Rittman, Suozzo, Romero) 270
The acid rain debate: Is one man's power another man's poison? (Monitor) 1028
The Atlanta Conference (Editorial) 1117
The Chesapeake Bay—a resource in the balance (Monitor) 1218
The debate on nonpoint controls (Editorial) 1215
The fate and effect of bisulfate in anaerobic treatment (Eis, Ferguson, Benjamin) 1355
The influence of process variables on secondary clarification (Chapman) 1425
The Literature Review issue (Editorial) 539
The 1982 Needs Survey—sixth in a series (Monitor) 432
The role of suspended particles in ultraviolet disinfection (Qualls, Flynn, Johnson) 1280
The value of safety data (Editorial) 115
Thermal pretreatment of sludges—a field demonstration (Haug, LeBrun, Tortorici) 23
Treatment of coal gasification wastewater with anaerobic filter technology (Suidan, Strubler, Kao, Pfeffer) 1263
Turbidity in the Aquatic Environment: An Environmental Factor in Fresh and Oceanic Waters (Book Review) 680a
Turmoil at EPA (Editorial) 327

U

U-tube aeration sensitivity to design parameters (Speece, Eheart, Givler) 1065
Units for specific resistance (Christensen) (Communication) 417
Use of EPA's CAPDET program for evaluation of wastewater treatment alternatives (McGhee, Mojgani, Vicidomina) 35
Using the Literature Review (Grady) (Feature) 540

V

Variable effluent nitrification requirements based on in-stream water quality (Kuchenrither, Houck, Inghram, Grimes, Elmund) 1489
Velocity and suspended solids distribution in settling tanks (Heinke, Tay) 261

W

Water strike disrupts Britain's orderly system (Monitor) 328
Water: The Nature, Uses, and Future of Our Most Precious and Abused Resource (Book Review) 21a
WPCF Presidential Message 5, 1118

AUTHOR, GEOGRAPHIC, AND SUBJECT INDEX

Volume 55

1983

A

Acetates, conversion to methane 1191
Acid mine drainage, sludge recycling 278
Acid precipitation 508a
Acid rain 1028
  EPA policy 320a
Activated carbon,
  adsorber design 1244
  adsorber properties 1168
  anaerobic filtration 1263
  microbial degradation 392
  priority pollutant removal 369
Activated sludge (Lit. Rev.) 615
  ATP and biomass 1348
  clarification 1331
  coal dewatering 145
  dynamic behavior 1348
  effect of biocatalysts 1373
  metals partitioning 1183
  methane production 1191
  oxygen transfer 1435
  removal of toxic organics 1286
Activated sludge process,
  aerosol release 1070
  batch reactor performance 377
  breakpoint chlorination 966
  clarification 1425
  clarification failure 54
  clarifier design 341
  diffuser performance 336
  history 436
  operations improvement 17
  plant capacity 360
  settling factors 234
  with activated carbon 369
Adsorption,
  activated carbon 392
  activated carbon properties 1168
  computer simulation 1244
Advanced wastewater treatment,
  expansion of 249
  variable effluent limits 73a
Aeration,
  fine bubble 1057
  in RBCs 270
  oxygen transfer 1338
  oxygen transfer efficiency 1435
  U-tube 1065
Aerobic processes,
  mortality indicator 76
  nitrogen-deficient wastewaters 467
Aerosols,
  from activated sludge process 1070
  microbes in 65
Agricultural watersheds, snowmelt runoff 170
Air diffusers,
  comparison with oxygen 336
  fine bubble 1057
Air pollution, acid rain 1028
Aitken, M.D., denitrification kinetics 1404
Alabama Association for WPC (meeting report) 322a
Albertson, O.E., sludge dewatering 145
Aldenhoff, G.A., laboratory management 1132
Algae,
  autoflotation 1075
  chloride pollution 513
Algae removal, overland flow 1256
Alkalimetric titration, anaerobic sludges 448
Alleman, J.E., activated sludge history 436
Alm, A., Senate approval 573a
Alpha factor, determination 1435
Alternate discharge, AWT use of 249
Alternative fuel, landfill gas 1325
Alternative technologies, planning 1042
Ammonia,
  AWT of 249
  effects on fish 1087
  un-ionized 303
Ammonia nitrogen removal, RBC kinetics 956
Ammonia-N, secondary chlorination 454
Amoebic cysts, disinfection 1174
Anaerobic bioreactor 1450
Anaerobic digestion,
  biogas production 1191
  inhibition 1441
  methane fermentation 44
Anaerobic filters, bacteria dieoff 385
Anaerobic process, effects of sulfite 1355
Anaerobic processes (Lit. Rev.) 623
Anaerobic sludge, alkalimetric titration 448
Anaerobic treatment, coal gasification wastes 1263
Analysis (Lit. Rev.) 555
  groundwater 92
  lab management 1132
  land application of sludge 187
  methanogens in sludge 1191
  nitrification inhibitor for BOD test 415
Antibiotics, coliform resistance 506
Aquatic life, effects of pollution (Lit. Rev.) 840
Aquatic sediments (Lit. Rev.) 822
Arbelaez, J., algal autoflotation 1075
Arizona W & PCA (meeting report) 393a
Arkansas WPCA (meeting report) 322a
Arrabal, F., microbe inactivation 297
Ash, lignite 310
Atiqullah, M., nitrification inhibition 1080
Atlanta, GA, water quality management 1121
ATP, activated sludge 1348
Austern, B.M., toxic organics removal 1286
Automation, treatment alternatives analysis 35

B

Bacteria,
  activated carbon adsorption 1168
  aerosol release 1070
  die-off in anaerobic filters 385
  die-off kinetics 285
  identification of fecal streptococci in aerosols 1211
Bacterial pathogens (Lit. Rev.) 895
Bailey, W.F., nitrification start-up 221
Baker, R.A., secondary chlorination 454
Bandy, J.T., rotating biological contactors 1457
Barth, E.F., SBR operation 484
Baryla, W.I., biocatalytic additives 1373
Batch flotation tests, usefulness of 110
Batch processes, priority pollutant removal 157
Bates, R.E., microbial aerosols 65
Bauer, D.R., composite sampling 1387
Baumgartner, B., pressure filters 130
Bausum, H.T., microbial aerosols 65
Beccari, M., denitrification kinetics 58, 1404
Beg, S.A., nitrification inhibition 1080
Bench scale, denitrification kinetics 58
Benedek, A.,
  activated carbon adsorbers 1168
  carbon adsorber design 1244
Benefield, L.D., indicator mortality 76
Benjamin, M.M., sulfur transformation in anaerobic processes 1355
Berg, G.E., AWT expansion 249
Berthouex, P.M.,
  data analysis 1417
  detergent phosphorus ban (Discussion) 323
Best available technology, amendments 256a
Bioassay, comparison indexes 522
Bioassays (Lit. Rev.) 801
Biochemical oxygen demand, see BOD
Biodegradability,
  bacteria 1168
  refractory organics 489
Biodegradation, toxic organics in POTWs 1286
Biofilms, trace organic removal by 1366
Biological filters (Lit. Rev.) 612
Biological nitrification, start-up of 221
Biological processes, organic treatability 97
Bioreactor, upflow 1450
Bledsoe, B.E., algae removal 1256
BOD analysis,
  nitrification in 1461
  nitrification inhibitor 415
BOD/CBOD effluent limitation 1461
BOD removal,
  effect of RBC flow reversal 1457
  effect of temperature 1233
Boiler fuel, landfill gas 1325
Bonomo, J.D., nitrification start-up 221
Booman, K., detergent phosphorus ban (Discussion) 323
Borrego, J.J., microbe inactivation 297
Bowers, D., water quality modeling 1476
Boyle, W.C.,
  oxygen transfer efficiency 1435
  oxygen transfer measurement 1338
Bratby, J., batch flotation tests (Communication) 110
Breakpoint chlorination, microbial effects 966
Brenniman, G.R., chlorine contact 164
Breyfogle, R., SBR operation 484

British Columbia PCA (meeting report) 123a, 581a
Brockett, B.E., microbial aerosols 65
Brown, G., AWT expansion 249
Bruvold, W.H., odor determination 229
Bubble, fine 1057
Bubble policy, proposal for 116
Buell, D.A., energy cost control 1239
Bulmer, B.E., odor determination 229

C

Cabelli, V.J., water quality criteria 1306
California WPCA (meeting report) 512a
Campbell, J.R., coal wastes 196
Cannon, R.E., aerosol release 1070
Carbon, activated 369, 1168
Carbon removal, RBC kinetics 956
Carbonation, magnesium recycling 136
Carthew, G.A., dynamic head loss 472
Cashion, B.S., secondary clarification 1331
Caspe, R.L., operation performance 935
Central States WPCA (meeting report) 513a
Centrifugation,
coal-aided 145
magnesium recycling 136
Certification, wastewater operator 1128
Chapin, W.A., treatment costs 444
Chapman, D.T., secondary clarification 1425
Chapra, S.C., phosphorus control 81
Chelation, electroplating wastes 984
Chemical processing wastes (Lit. Rev.) 726
Chemical wastes, biological treatability 97
Chesapeake Bay,
action plan 1218
state water quality programs 1224
Chesapeake Bay Governor's Conference 1224
Chesapeake Bay program, final report 628a
Chesapeake WPCA, Inc. (meeting report) 618a
Chloride pollution, Great Lakes 513
Chlorination,
breakpoint 966
coliform damage 164
cyst inactivation 1174
role of ammonia-N 454
state-of-the-art 457
Chlorine, effects on fish 1087
Chlorophyll, euthrophication models 990
Christensen, G.L.,
emulsified lipids (Discussion) 1023
sludge stabilization 1381
specific resistance units for sludge (Communication) 417
Chromium, foam flotation removal 1144
Clarification,
activated sludge 1331
failure of 54
settling factors 234
Clarifier,
capacity determination 360
design concepts 349
Clarifier design, activated sludge process 341
Clean Air Act, legislative update 575a
Clean Water Act,
1983 amendments 359a
1983 changes 256a
amendments 25a, 72a, 117a, 160a
legislative update 575a
long-term revisions 123
non-point source pollution amendment 672a
perspective of 14
reauthorization 626a
Ruckelshaus testimony 359a
Clean Water Act hearings 507a
Cleary, E.J., river basin management (Feature) 1034
Clevenger, T.E.,
metal extraction 984
sludge toxicity 1470
Coagulants, foam flotation 1144
Coal, dewatering sludge 145
Coal and mine drainage (Lit. Rev.) 701
Coal gasification, anaerobic waste treatment 1263
Coal wastes, treatment of 196
Cobourn, G.H., composite correction program 929
COD removal, effect of RBC flow reversal 1457
Coliform damage, from chlorination 164
Coliform density, effect of ozonation 1158
Coliforms,
aerosol release 1070
antibiotic-resistant 506
marine inactivation 297
Collection systems (Lit. Rev.) 657
STEP pressure sewers 1004
Collins, J.R., operations improvement 17
Combined sewer overflow (Lit. Rev.) 676
Combined sewers, overflow monitoring 1015
Community comparison index, diversity 522
Composite correction program, case history 929
Composite sampling, flow proportional 1387
Computer monitoring, CSO discharges 1015
Computerization, treatment alternatives analysis 35
Congress,
1982 elections 11
1983 committees 118a
environmental information service 672a
Conservation, energy exchange 941
Construction costs, impact on small cities 444
Construction costs index,
1Q83 323a
3Q82 26a
Construction grants,
phase-out 209
project accountability 217
Construction grants program,
EPA study 1412
operation performance 935
state roles 575a
Contaminants. coal wastes 196
Continuous-f w reactors, pollutant removal 157
Control, of ozone disinfection 1163
Copper, foam flotation removal 1144
Copper bioassay, diversity indexes 522
Corfis, N.H., activated carbon 369
Corneau, D.G.M., land application 187
Costs,
phosphorus control 81
treatment by small communities 444
Council on Environmental Quality, 1984 budget 573a
Cyanide wastes (Lit. Rev.) 723
Cyanophages, aerosol release 1070

D

Daigger, G.T., operations improvement 17
Dairy wastes (Lit. Rev.) 692
Dams, court ruling 25a
de Vicente, A., microbe inactivation 297
Deb, A.K., water quality modeling 1476
Degradation, microbial 392
DeGrange, C.E., odor determination 229
Denitrification (Lit. Rev.) 632
batch reactor performance 377
by wetlands 495
Design,
activated sludge clarifiers 341
activated sludge settling 234
clarifiers 54, 349
head loss criteria 472
overland flow systems 255
performance responsibility 217
process 17
secondary clarification 1425
stabilization ponds 1252
U-tube aeration 1065
Dewatering,
coal-assisted 145
pressure filters 130
Dhaliwal, B.S., secondary chlorination 454
Dick, R.I., emulsified lipids (Discussion) 1023
Die-off, bacterial kinetics 285
Diffusers, fine bubble 1057
Digester, energy exchange 941
Digestion,
anaerobic 448
sludge pretreatment 23
DiGiano, F.A., sorbed substrates 392
Discharge,
alternate 249
CSO 1015
Discharges, effects on fish 1087
Disease, water quality criteria 1306
Disease transmission, viruses 1111
Diseases, drinking water (Lit. Rev.) 905
Disinfection (Lit. Rev.) 650
amoebic cysts 1174
effects on viruses 1111
ozonation model 1158
ozone 1163
role of ammonia-N 454
sludge irradiation 977
state-of-the-art 457
UV 1280
Dispersion models, settling tanks 261
Dissanayake, M.G., bacterial die-off 285
Dissolved oxygen,
meters 178
snowmelt runoff effects 170
streams and reservoirs (Lit. Rev.) 764
U-tube aeration 1065
Diversity index, community comparison 522
DO,
effects on algal autoflotation 1075
phosphorus in sediments 1105
Doyle, M.L., oxygen transfer efficiency 1435
Dufour, A.P., water quality criteria 1306
Dye dilution method, flow measurement 531
Dynamic head loss, raw sludge pumping 472
Dysart, B.C. III, interview (Monitor) 1318
Dzombak, D.A., trace element control 424

E

Eckelmann, G., lagoon design 1252
Economics,
phosphorus control 81
treatment alternatives analysis 35

Eddy coefficients, settling tanks 261
Editorials,
Resumption of local leadership 1
The value of safety data 115
Finishing the job 209
Turmoil at EPA 327
A powerful legacy 429
The Literature Review issue 539
A triumphant return 909
A profile of WPCF membership 1027
The Atlanta Conference 1117
The debate on nonpoint controls 1215
A new operator service 1315
Rational risk assessment 1405
Effluent guidelines 508a, 573a
EPA 161a
Effluent limitations,
compliance 1417
water bubble 116
Effluent limits, un-ionized ammonia 303
Effluent standard, ammonia 1489
Effluent standards, state performance 935
Effluents, ozone disinfection 1158
Eheart, J.W., U-tube aeration 1065
Eidsness, E., resignation 320a
Eis, B.J., sulfur transformation in anaerobic processes 1355
Elections, 1982 11
Electric, energy exchange 941
Electroplating wastes (Lit. Rev.) 723
liquid-liquid extraction 984
Elmund, G.K., water quality modeling 1489
Emerson, S.L., nitrogen-deficient wastewaters 467
Energy costs, management program 1239
Energy exchange, co-generation 941
Enfield, C.G., rapid infiltration systems 1150
Engel, J.P., amoebic cyst inactivation 1174
Enterocci, water quality indicator 1306
Environmental issues, information to Congress 672a
EPA,
1982 needs survey 117a
1984 budget 26a, 159a, 361a, 573a
Congress investigates 159a, 327
construction costs index 323a
goals for 1983 118a
municipal policy 575a
needs survey 432
organic chemical regs 202a
personnel changes 320a
project accountability 217
regulatory agenda 320a, 676a
Ruckelshaus nomination 201a, 259a
steel industry regs 202a
Equalization, flow 249
Ernest, L.A., laboratory management 1132
Estuarine pollution (Lit. Rev.) 767
Eutrophication (Lit. Rev.) 757
Eutrophication models, phosphorus loading 990
Evans, J.W., ozonation of effluents 1158
Ewing, L., oxygen transfer measurement 1338
Exhaust gas monitoring, ozone disinfection 1163
Extend aeration systems, performance survey 1138
Extraction, liquid-liquid 984

F

Fecal coliforms,
chlorination contact 164
mortality patterns 76
Fecal streptococci, identification of 1211
Federal Insecticide, Fungicide, and Rodenticide Act, legislative update 575a
Ferguson, J.F., sulfur transformation in anaerobic processes 1355
Fermentation, methane 44
Fermentation industry wastes (Lit. Rev.) 688
Filters,
anaerobic 385
pressure 130
Filtration,
coliforms 164
relation to NOD 1196
Filtration of sludge, specific resistance units 417
Fish, secondary discharge effects 1087
Fixed station monitoring, water quality 400
Flocculation, inhibition of 947
Florida PCA (meeting report) 121a
Flotation,
algal 1075
batch 110
Flow,
head loss criteria 472
overland 255
Flow equalization, AWT use of 249
Flow measurement, dye dilution method 531
Flynn, M.P., ultraviolet disinfection 1280
Foam flotation, metal removal 1144
Food, Drug, and Cosmetic Act, legislative update 575a
Food processing wastes (Lit. Rev.) 683, 686
Forndran, A., energy exchange 941
Foxen, R.J., BOD effluent limitation 1461
Funk, W.H., phosphorus in sediments 1105

G

Gambrell, R.P., metal characterization 1201
Gas transfer, U-tube aeration 1065
Gasification,
coal wastes 196
lignite leaching 310
Germany, Ruhr river basin management 1034
Gibbons, H.L., Jr., phosphorus in sediments 1105
Gilliom, R.J., phosphorus transport by groundwater 1297
Givler, C.A., U-tube aeration 1065
Goehring, C.A., dynamic head loss 472
Gomez, L.F., microbe inactivation 297
Gorsuch, A.M., cited for contempt 119
Grady, C.P.L., Jr.,
breakpoint chlorination 966
settling factors 234
using the Lit. Rev. 540
Graham, M.J., CSO discharges 1015
Graham, P.J., chlorine contact 164
Grants, small communities 444
Granular activated carbon, microbial degradation 392
Great Britain, water strike 328
Great Lakes,
chloride pollution 513
phosphorus control costs 81
taconite tailings 317
Grimes, M.M., water quality modeling 1489
Groundwater,
contamination 1393
lignite leaching 310
management 1393
microbiology (Lit. Rev.) 891
nitrogen control 1150
sampling guidelines 92
Growth changes, anaerobic digestion 448
Growth cultures, denitrification kinetics 58
Gutierrez, A.F., flow measurement 531

H

Haas, C.N., virus transmission 1111
Hall, J.C., BOD effluent limitation 1461
Hallum, A., water quality management (Feature) 1121
Harrison, W., coal wastes 196
Hartz, K.E., phosphorus in sediments 1105
Haug, R.T., sludge pretreatment 23
Head loss, raw sludge pumping 472
Health effects,
of water pollution 1412
pollution of recreational water 1306
treatment and disposal (Lit. Rev.) 679
Heat,
energy exchange 941
sludge pretreatment 23
Heat recovery, AWT use of 249
Heavy metal removal, anaerobic 1450
Heavy metals (Lit. Rev.) 816
foam flotation 1144
in lake sediments 1201
liquid-liquid extraction 984
nitrification inhibition 1080
soil analysis 187
Heidinger, R.C., fish toxicity 1087
Heidtke, T.M., phosphorus control 81
Heinke, G.W., settling tanks 261
Hemphill, D.D., sludge toxicity 1470
High purity oxygen, activated sludge 336
Hoang, L.H., anaerobic filters 385
Houck, C.P.,
pressure filters 130
water quality modeling 1489
Howard, W.R., alternative fuel 1325
Hughes, J.P., water quality monitoring 400
Huibregtse, G.L.,
fine bubble aeration 1057
oxygen transfer efficiency 1435
Humenick, M.J., lignite leaching 310
Hunter, W.G., data analysis 1417
Hydraulic loading, rapid infiltration 1150
Hydraulic retention time, effect on clarification 1331
Hydrogen sulfide, odor determination 229
Hypochlorite, effect on cysts 1174

I

Idelovitch, E., magnesium recycling 136
Illinois WPCA (meeting report) 393a
Inactivation, microbes in marine waters 297
Incineration, coal-assisted 145
Indexes, diversity and community comparison 522
Indiana WPCA (meeting report) 166a
Indicator bacteria, selection by risk analysis 1306
Indicator species, mortality patterns 76
Industrial treatment, methane fermentation 44
Industrial wastes (Lit. Rev.) 683
biological treatability 97
coal gasification 196
Industry, plant closings 120a

Information retrieval, guides for 541
Infrastructure repair, wastewater facility requirements 914
Inghram, C.W., water quality modeling 1489
Inhibition,
  denitrification kinetics 58
  nitrification 1080
  of flocculation 947
Inorganics, analysis for (Lit. Rev.) 555
Invertebrates, effects of pollution (Lit. Rev.) 829
Iowa WPCA (meeting report) 618a
Iron sludge, recycling of 278
Irradiation, sludge 977
Irrigation, wastewater use 65
Irvine, R.L., SBR operation 484

J

Jackson, K.F., lignite leaching 310
James, R.K., un-ionized ammonia 303
Jenkins, S.R., alkalimetric titration 448
Johnson, J.D., ultraviolet disinfection 1280
Johnson, L.D., anaerobic digestion 1441
Jones, B.E., activated carbon 369
Jones, C.H., WPCF Presidential message 5, 1118
Jones, E.R., nitrification start-up 221
Jones, R.A.,
  eutrophication models 990
  groundwater sampling 92
  water quality monitoring 405

K

Kansas WPCA (meeting report) 392a
Kao, S.W., anaerobic filtration 1263
Keefer, G.B., sludge recycling 278
Keinath, T.M.,
  clarification failure 54
  secondary clarification 1331
Kelly, R.F., collection systems 1004
Kentucky-Tennessee WPCA (meeting report) 166a
Kerster, H.W., composite sampling 1387
Ketchum, L.H., SBR operation 484
Khalid, R.A., metal characterization 1201
Khayer, M.A., CSO discharges 1015
Kincannon, D.F.,
  biological treatability 197
  removal mechanisms 157
Kinetics,
  ammonia nitrogen/carbon removal 956
  anaerobic filters 385
  bacteria die-off 285
  denitrification 58
  nitrogen-deficient wastewater 467
  oxygen transfer in RBCs 270
  plant capacity 360
Kirsch, E.J., breakpoint chlorination 966
Kish, A.J., antibiotics resistance 506
Kocher, W.M., methane fermentation 44
Kooler, J.M., odor determination 229
Koopman, B., algal autoflotation 1075
Kopper, M., sludge dewatering 145
Kuchenrither, R.D.,
  indicator mortality 76
  water quality modeling 1489
Kugelman, I.J.,
  dissolved oxygen meters 178
  heavy metals in sludge 1183
  toxic organics removal 1286
Kulin, G., dissolved oxygen meters 178

L

Laboratory, quality assurance 1132
Lagoons (Lit. Rev.) 622
  design equations 1252
  resistant coliforms 506
Lake Superior, taconite tailings 317
Lakes,
  eutrophication models 990
  metals in sediments 1201
  P transport to 1297
  phosphorus in sediments 1105
Lampky, J.R., antibiotics resistance 506
Land application,
  microbial aerosols 65
  overland flow 255
  sludge 76
  sludge toxicity 1470
  soil analysis 187
  wastewater (Lit. Rev.) 675
Land treatment,
  algae removal 1256
  nitrogen control 1150
Landfill gas, for boiler fuel 1325
Lang, M., lignite leaching 310
Laquidara, V.D., clarification failure 54
Leach, L.E., rapid infiltration systems 1150
Leachate, from sludge ash 1271
Leaching, lignite ash 310
LeBrun, T.J., sludge pretreatment 23
LeDuy, A., activated sludge dynamic behavior 1348
Lee, G.F.,
  eutrophication models 990
  groundwater sampling 92
  taconite tailings 317
  water quality monitoring 405
Lee, J.S., plant capacity 360
Legislation, Clean Water Act changes 117a, 160a
Lehman, P.J., rotating biological contactors 1233
Levin, M.A., water quality criteria 1306
Lewis, W.M., fish toxicity 1087
Li, A.Y.L., sorbed substrates 392
Lignite ash, leaching characteristics 310
Lime sludges, magnesium recycling 136
Lime stabilization 1381
  process modification 1381
Lincoln, E.P., algal autoflotation 1075
Liquid extraction, metals 984
Literature searching, guides to 541
Lloyd, R.D.C., plant management 1228
Loading, phosphorus 990
Loftis, J.C.,
  water quality management 408
  water quality model 1098
Louisiana WPCA (meeting report) 263a
Lue-Hing, C., nitrogenous oxygen demand 1196
Luthy, R.G., coal wastes 196

M

Macroinvertebrates, effects of pollution (Lit. Rev.) 833
Magnesium recycling, high-lime sludges 136
Maintenance,
  dissolved oxygen meters 178
  management 1228
Management,
  areawide water quality 1121
  energy costs 1239
  impact on performance 1051
  laboratories 1132
  O&M 1228
  water quality 408
Manning equation, flow measurement 531
Manolakis, G., management training 1051
Marine environment, microbe inactivation 297
Marine pollution (Lit. Rev.) 767
Markets, pollution control in Middle East 211
MASTER, carbon adsorption model 1244
Mates, A., microbiological analysis (Communication) 1211
Mawson, S.J., phosphorus in sediments 1105
McCabe, L.J., water quality criteria 1306
McCormick, S., composite sampling 1387
McDonald, H.S., alternative fuel 1325
McGhee, T.J., treatment alternatives analysis 35
McIntyre, G., foam flotation 1144
McKim, H.L., microbial aerosols 65
Meckes, M.C.,
  ozonation of effluents 1158
  ozone control 1163
Mediation, negotiating regulations 7
Medley, D.R.,
  organic biodegradability 489
  removal mechanisms 157
Messner, H.M., Senate approval 573a
Metals,
  in lake sediments 1201
  in sludge ash 1271
  liquid-liquid extraction 984
  partitioning in sludge 1183
Meters, dissolved oxygen 178
Methane, produce from sludge 1191
Methane fermentation, industrial wastes 44
Methanogenic bacteria, acclimation to sulfite 1355
Michigan WPCA (meeting report) 620a
Microbes,
  breakpoint chlorination effects 966
  in aerosols 65
  inactivation in marine environment 297
Microbial degradation, activated carbon 392
Microbiology of water (Lit. Rev.) 869
Middlebrooks, E.J., RBC kinetics 956
Miller, E., settling factors 234
Mississippi WPCA (meeting report) 581a
Missouri WPCA (meeting report) 263a
Mixing, algal autoflotation 1075
Mixing and transport (Lit. Rev.) 752
Modeling, secondary utilization 1366
Models,
  biological treatability 97
  capacity 360
  chloride pollution 513
  eutrophication 990
  U-tube aeration 1065
  water quality 1098, 1476
Mojgani, P., treatment alternatives analysis 35
Monitoring,
  groundwater 92
  odors 229
  ozone disinfection 1163
  water quality 400, 405
Montana WPCA (meeting report) 392a
Monteith, H.D., land application 187
Monteith, T.J., chloride pollution 513
Morgan, J.M., alkalimetric titration 448

Mortality patterns, indicator species 76
Mullins, W.A., sludge toxicity 1470
Municipal treatment,
  grant regulations 217
  history 436
Municipalities,
  alternative technologies 1042
  energy cost control 1239
Murr, K.R., online literature searching 541

N

Namkung, E., biological trace organic removal 1366
Narbaitz, R., carbon adsorber design 1244
Narkis, N., flocculant inhibition 947
National Wildlife Federation, interview of President (Monitor) 1318
Nebraska WPCA (meeting report) 76a
Needs survey, 1982 117a, 432
Nelson, J.K., air diffusers 336
Nevada WPCA (meeting report) 76a
New England WPCA (meeting report) 121a
New Federalism, governors' proposal 73a
New Jersey WPCA (meeting report) 392a
New York WPCA (meeting report) 215a
Nichols, D.S., wetlands treatment 495
Nichols, V., removal mechanisms 157
Nitrate/nitrite reduction, kinetics 58
Nitrification,
  alternatives for compliance 1489
  batch reactor performance 377
  in BOD analysis 1461
  inhibition of 1080
  inhibitor for BOD tests 415
  relation to NOD 1196
  start-up of 221
  un-ionized ammonia 303
Nitrogen, secondary chlorination 454
Nitrogen removal, land treatment 1150
Nitrogen-deficient wastewaters, treatment of 467
Nitrogenous oxygen demand 1461
  in nitrifying waters 1196
Noncompetitive inhibitors, of nitrification 1080
Nonpoint pollution (Lit. Rev.) 748
  Clean Water Act amendment 672a
  Clean Water Act hearings 507a
  snowmelt runoff 170
North Carolina WPCA (meeting report) 122a
North Dakota WPCA (meeting report) 28a
Novak, J.T., metal extraction 984
Nutrient removal, by wetlands 495

O

O&M,
  composite correction program 929
  management systems 1228
  package plants 1138
Obayashi, A.W., nitrogen oxygen demand 1196
O'Brien, R.T., sludge irradiation 977
Ocean discharge, waiver applications 120a
Odor determination, hydrogen sulfide 229
Off-gas techniques 1338
Ohio WPCC (meeting report) 620a
On-site systems (Lit. Rev.) 642
  extend aeration plants 1138
Operation,
  activated sludge process 17
  nitrification 221
  rapid infiltration systems 1150
Operations,
  management 1228
  state performance 935
  supervisor training 1051
Operator, certification 1128
Organic chemicals,
  analysis for (Lit. Rev.) 577
  biodegradability of 489
  biological treatability 97
  EPA regulations 202a
  coal gasification 196
Organic matter, flocculation inhibition 947
Organic removal, effect of enzymes 1373
Overflow rate, effect on clarification 1331
Overflows, computer monitoring 1015
Overland flow,
  algae removal 1256
  physical design 255
Oxidation, organic chemicals 489
Oxidation ponds (Lit. Rev.) 622
  algal autoflotation 1075
Oxygen,
  dissolved 178
  high purity 336
Oxygen demand,
  nitrogenous 1196, 1461
  taconite tailings 317
Oxygen transfer,
  fine bubble diffusers 1057
  in RBCs 270
  measurement 1338
  U-tube aeration 1065
Oxygen transfer coefficient, determination 1435
Oxygen uptake, effect of biocatalysts 1373
Ozonation,
  for organic biodegradation 489
  predictive model 1158
  priority pollutant removal 157
  state-of-the-art 457
Ozone disinfection, monitoring 1163

P

Pacific Northwest PCA (meeting report) 166a
Padgett, L.E., sludge disposal 1271
Paller, M.H., fish toxicity 1087
Pallesen, L., detergent ban (Discussion) 323
Pano, A., RBC kinetics 956
Parker, D.S., clarifier design 349
Parkin, G.F., methane fermentation 44
Passino, R., denitrification kinetics 58, 1404
Patents, activated sludge process 436
Pathogen destruction, by irradiation 977
Patmont, C.R., phosphorus transport by groundwater 1297
PCA of Oklahoma (meeting report) 581a
Peel, R.G., activated carbon adsorbers 1168
Pellissier, R., groundwater management 1393
Performance,
  composite correction program 929
  RBCs 1233
Perkins, J.L., comparison indexes 522
Permit programs, final EPA regulations 628a
Personnel,
  laboratory management 1132
  training for managers 1051
  wastewater 918
Peterson, W., management training 1051
Petrasek, A.C., Jr.,
  heavy metals in sludge 1183
  toxic organics removal 1286
Petrochemical wastes (Lit. Rev.) 705
Pfeffer, J.T., anaerobic filtration 1263
pH, alkalimetric titration 448
Phosphorus,
  in lake sediments 1105
  soil transport 1297
Phosphorus allocation, AWT for 249
Phosphorus control, costs 81
Phosphorus loading, eutrophication models 990
Phosphorus removal, by wetlands 495
Physicochemical treatment (Lit. Rev.) 599
Planning, rural wastewater 1042
Plant operation, optimization of (Lit. Rev.) 647
Plumb, R.H., Jr., taconite tailings 317
Poll, public opinion 72a
Pollution Control Association of Ontario (meeting report) 512a
Polprasert, C., anaerobic filters 385
Polprasert, D., bacterial die-off 285
Polychlorinated biphenols, soil analysis 187
Polyelectrolytes, inhibition of 947
Popowchak, T., composite correction program 929
Potable water, microbiology (Lit. Rev.) 891
Power industry wastes (Lit. Rev.) 709
Prakasam, T.B.S., activated sludge history 436
Pressley, T.A., toxic organics removal 1286
Pressure filters, dewatering 130
Pressure sewers, STEP 1004
Pretreatment,
  Clean Water Act changes 256a
  sludges 23
Prindle, W.R., energy cost control 1239
Priority pollutants,
  activated carbon removal 369
  inhibition of anaerobic digestion 1441
  removal mechanisms 157
Process control,
  clarification failure 54
  data evaluation 1417
Process design, activated sludge 17, 234
Protozoa, disinfection 1174
Public health, water pollution and 1412
Puerto Rico WPCA (meeting report) 514a
Pulp and paper industry wastes (Lit. Rev.) 694
Pumps, raw sludge head loss 472
Puntenney, J.L., air diffusers 336

Q

Quality control, analytical labs 1132
Qualls, R.G., ultraviolet disinfection 1280

R

Radiation, of sludge 977
Radioactive wastes (Lit. Rev.) 735
Ramadori, R., denitrification kinetics 58, 1404
Randtke, S.J., nutrient determination 427
Rao, K.C., nitrogenous oxygen demand 1196
Rapid infiltration, nitrogen control 1150
Rappaport, S.M., odor determination 229
Rasmussen, D.C., fine bubble aeration 1057
Rast, W., eutrophication models 990
Ravan, J., U.S. EPA Assistant Administrator for Water 628a

Reactors, priority pollutant removal 157
Rebhun, M., flocculant inhibition 947
Recknagel, F., lagoon design 1252
Reclamation (Lit. Rev.) 662
Recreation, water viruses 1111
Recycling,
  acid mine wastes 278
  magnesium 136
Reddy, C.N., metal characterization 1201
Redmon, D., oxygen transfer measurement 1338
Reduction, nitrate/nitrite 58
Rees, K., composite sampling 1387
Reference distribution, for data evaluation 1417
Refinery waste, carbon adsorption 1244
Regan, K.D., 1982 salary survey (Feature) 918
Regional treatment, dewatering 130
Regulations,
  development by negotiation 7
  project accountability 217
Reinhart, D., water quality management (Feature) 1121
Removal,
  efficiency of settling tanks 261
  priority pollutants 157
Resistance, coliforms and antibiotics 506
Resource Conservation and Recovery Act, legislative update 575a
Reuse, acid mine wastes 278
Richardson, W., chloride pollution 513
Richter, G.A., operations improvement 17
Riddell, M.D.R., plant capacity 360
Rittmann, B.E.,
  biological trace organic removal 1366
  oxygen transfer 270
River basin management, Ruhr river 1034
Rivera, A.L., heavy metal removal 1450
Roberts, K., sludge toxicity 1470
Rocky Mountain WPCA (meeting report) 29a
Rodgers, P., chloride pollution 513
Rodman, L.C., clarifier design (Feature) 341
Rodriguez, J.J., foam flotation 1144
Romero, B.R., oxygen transfer 270
Romero, P., microbe inactivation 297
Rooney, T., oxygen transfer efficiency 1435
Rooney, T.C., fine bubble aeration 1057
Roseboom, D.P., ammonia criteria 420
Rotating biological contactors,
  ammonia nitrogen/carbon removal kinetics 956
  BOD removal 1457
  COD removal 1457
  flow reversal 1457
  operation 1233
  oxygen transfer 270
  performance evaluation 1233
  seasonal operation 1233
Roy, D., activated sludge dynamic behavior 1348
Roy, P.H., activated sludge dynamic behavior 1348
Rubin, A.J., amoebic cyst inactivation 1174
Ruckelshaus, W.D.,
  nominated as EPA head 201a, 259a, 911
  testimony on Clean Water Act 359a
Ruhr river, basin management 1034
Runoff,
  chloride pollution 513
  snowmelt 170
Rural planning, alternative systems 1042

S

Sack, W.A., sludge recycling 278
Safe Drinking Water Act, legislative update 575a
Salaries, wastewater personnel 918
Salmonella, marine inactivation 297
Salts, chloride pollution 513
Sampling,
  composite 1387
  groundwater 92
  land application of sludge 187
  methods 1387
Sandring, G., lagoon design 1252
Sawyer, C.L., alkalimetric titration 448
Schaeffer, D.J., composite sampling 1387
Schaub, S.A., microbial aerosols 65
Scholze, R.J., rotating biological contactors 1457
Schroeder, E.D.,
  batch reactor performance 377
  overland flow design 255
Schuk, W.W., dissolved oxygen meters 178
Schumacher, P.W., microbial aerosols 65
Schwarz, S., lagoon design 1252
Scully, L.J., energy cost control 1239
Seasonal variations, un-ionized ammonia 303
Secondary chlorination, ammonia-N role 454
Secondary clarification, design and control 1425
Secondary treatment, discharge effects on fish 1087
Secondary utilization,
  modeling 1366
  trace organic removal 1366
Sediment,
  metals characterization 1201
  phosphorus in 1105
Sedlack, R., detergent ban (Discussion) 323
Septic systems, rural planning 1042
Septic tanks, effluent P transport 1297
Sequencing batch reactors, performance of 377
Settling, factors affecting 234
Settling tanks, removal efficiency 261
Sewers,
  flow measurement 531
  pressure 1004
Sherrard, J.H., nitrogen-deficient wastewaters 467
Shigella, marine inactivation 297
Shimp, G.F.,
  AWT expansion 249
  pressure filters 130
Silverstein, J., batch reactor performance 377
Siu, M., flow measurement 531
Sludge,
  ash disposal 1271
  coal-assisted dewatering 145
  disinfection 1381
  high-lime 136
  land application of 76, 187
  metal contamination 1470
  metals partitioning 1183
  methanogen assay 1191
  mutagenicity 1470
  pressure filter dewatering 130
  recycling of 278
  specific resistance units 417
Sludge pretreatment, thermal 23
Sludge pumping, head loss 472
Sludge treatment (Lit. Rev.) 637
  irradiation 977
  lime stabilization 1381
Smillie, G.M., water quality model 1098
Smit, R.J., treatment costs 444
Smith, J.W., operations improvement 17
Smith, R.G., overland flow design 255
Snowmelt, dissolved oxygen 170
Soil analysis, application of sludge 187
Soils, transport of phosphorus 1297
Solid wastes, effects on water quality (Lit. Rev.) 743
Solids retention time, effect on clarification 1331
Solvent extraction, coal wastes 196
Sonzogni, W.C., chloride pollution 513
South Carolina WPCA (meeting report) 72a
South Dakota WPCA (meeting report) 28a
Specific resistance, units for sludge 417
Speece, R.E.,
  methane fermentation 44
  U-tube aeration 1065
Sproul, O.J., amoebic cyst inactivation 1174
Stabilization, sludge pretreatment 23
Stabilization ponds,
  bacterial die-off 285
  design equations 1252
Stamoudis, V.C., coal wastes 196
Staphylococcus, mortality patterns 76
Starkey H.G., energy exchange 941
Start-up, nitrification process 221
Statistical analysis, process control and compliance 1417
Steel industry, effluent limits 202a
Steel industry wastes (Lit. Rev.) 719
STEP, pressure sewers 1004
Stollar, R.L., groundwater management 1393
Stover, E.L.,
  biological treatability 97
  organic biodegradability 489
  removal mechanisms 157
Stratton, R.G., biological trace organic removal 1366
Stream modeling 1476
Streptococcus,
  marine inactivation 297
  mortality patterns 76
Strubler, C.E., anaerobic filtration 1263
Studebaker, P., groundwater management 1393
Stukenberg, J.R., clarifier design (Feature) 341
Substrate microfauna (Lit. Rev.) 863
Suidan, M.T., anaerobic filtration 1263
Sulfite, effects on anaerobic process 1355
Sullivan, J.F., snowmelt runoff 170
Suozzo, R., oxygen transfer 270
Superfund, legislative update 575a
Surface resistivity, for groundwater monitoring 1393
Surfactants, foam flotation 1144
Surveys, water quality 400
Survival, antibiotic-resistance coliforms 506
Suspended solids,
  effect on UV disinfection 1280
  flocculation inhibition 947
  relation to NOD 1196
  settling tanks 261
Swanson, S.A., AWT expansion 249
Swimming,
  pollution-induced symptoms 1306
  virus transmission 1111
Synthetic fuel wastes (Lit. Rev.) 705

T

Taconite tailings, oxygen demand 317
Tandoi, V., denitrification kinetics 58, 1404
Tay, A.J.H., settling tanks 261
Temperature,
  effect on BOD removal 1233
  rotating biological contactor effects 270
Texas WPCA (meeting report) 582a
Textile industry wastes (Lit. Rev.) 693
Thackston, E.L., foam flotation 1144
Thanh, N.C., bacterial die-off 285
The Institute of WPC (meeting report) 676a
Theis, T.L., sludge disposal 1271
Thermal effects (Lit. Rev.) 787
Thickening, clarification failure 54
Titration, alkalimetric 448
TOC removal by clarification 1331
Tollefson, D.J., collection systems 1004
Tortorici, L.D., sludge pretreatment 23
Touslee, J.E., clarifier design (Feature) 341
Toxic effects, secondary discharges on fish 1087
Toxic organics,
  air stripping 1286
  biodegradation 1286
  partitioning in sludge 1286
Toxic Substances Control Act, legislative update 575a
Toxic torts, legislative update 575a
Toxicity,
  effect on anaerobic digestion 1441
  municipal sludges 1470
  un-ionized ammonia 303
Trace elements (Lit. Rev.) 816
Trace metals, in lake sediments 1201
Trace organics, removal by secondary utilization 1366
Training,
  composite correction program 929
  impact on performance 1051
Treatment alternatives, computer analysis 35
Treatment costs, energy 1239
Treatment plant construction, delay costs 672a
Treatment plants, state performance 935
Trgovcich, B., breakpoint chlorination 966
Trickling filters, state performance 935
Troxler, R., water quality management (Feature) 1121
Tuntoolavest, M., settling factors 234

U

U-tube aeration, sensitivity of 1065
Uchrin, C.G., operation performance 935
Uhlmann, D., lagoon design 1252
Ultraviolet, absorbance in wastewater 1280
Ultraviolet irradiation,
  disinfection 1280
  state-of-the-art 457
Urban runoff (Lit. Rev.) 676
Utah WPCA (meeting report) 392a
Utilities, energy cost control 1239

V

Valcke, D., methanogenic bacteria in sludge 1191
van Belle, G., water quality monitoring 400
van Teylingen, J.E., dynamic head loss 472
Velocity, settling tanks 261
Velocity models, plant capacity 360
Venosa, A.D.,
  ozonation of effluents 1158
  ozone control 1163
  wastewater disinfection 457
Verstraete, W., methanogenic bacteria in sludge 1191
Vesiyhdistys R.Y., Water Association Finland (meeting report) 215a
Vicidomina, F., treatment alternatives analysis 35
Virginia WPCA (meeting report) 516a
Viruses, in water 1111

W

Wachs, A.M., magnesium recycling 136
Ward, R.C.,
  water quality management 408
  water quality model 1098
Washington, B., nitrogenous oxygen demand 1196
Wasteload allocation, determination of 1476
Wastewater, sampling 1387
Water bubble, effluent limitations 116
Water characteristics, determination (Lit. Rev.) 573
Water pollution, and public health 1412
Water quality,
  criteria for ammonia 303
  management in G. Britain 328
  modeling 1098, 1476
  monitoring of 400, 405
  recreational criteria 1306
  stochastic nature of 408
Water quality management 1489
  Atlanta area 1121
Water quality modeling, ammonia 1489
Water quality standards, state responsibility 672a
Water resources management 1034
Watersheds, snowmelt effects 170
Wawronowicz, L.J., fish toxicity 1087
Webber, M.D., land application 187
Weber, W.J., Jr., activated carbon 369
Weddle, C.L., alternative fuel 1325
Weigand, R.G., extended aeration plant performance 1138
Weinberg, L.M., plant management 1228
Wells, groundwater sampling 92
West Virginia WPCA (meeting report) 581a
Western Canada PCA (meeting report) 28a
Westphal, P.A., sludge stabilization 1381
Wetlands, nutrient removal by 495
Wicke, H.D., phosphorus control 81
Wilson, D.J., foam flotation 1144
Wilson, T.E., plant capacity 360
Wind, aerosol release 1070
Winslow, L.A., toxic organics removal 1286
Wise, R.H., toxic organics removal 1286
Witherow, J.L., algae removal 1256
Wolfson, M.M., rural alternatives 1042
Wolman, A.,
  Clean Water Act perspective (Feature) 14
  water pollution and public health 1412
WPCF,
  1983 conference 447a
  1983 conference report 1406
  1983 Government Affairs Seminar 256a
  1983 Presidential message 5
  financial statement 536
  Government Affairs Seminar, testimony on Clean Water Act 676a
WPCF Yearbook, Published as Part II of March issue, with separate pagination
  1982-83 Officers 1
  Board of Control 1
  WPCF Staff 4
  Past Presidents 4
  Constitution & Bylaws 5
  Statement of Policy 17
  WPCF Statements and Resolutions 18
  WPCF Organization, Structure, and Mode of Operation 24
  Committee Directory 27
  Honors and Awards 41
  WPCF Publications 62
  WPCF Conferences 65
  Membership Classifications 67
  Membership Contest 67
  WPCF Member Associations and Affiliations 70
  Associate Membership 75
  Consultant Membership 93
  Contractor Membership 129
Wu, T.C., odor determination 229

Y

Yake, W.E., un-ionized ammonia 303
Yang, C.H.J., methane fermentation 44
Yeager, J.G., sludge irradiation 977
Young, J.C.,
  anaerobic digestion 1441
  biocatalytic additives 1373
  nitrification in BOD test (Communication) 415

Z

Zenz, D.R., nitrogenous oxygen demand 1196
Zinc, foam flotation removal 1144